IN THE CLAIMS

1-34. (Cancelled).

35. (New) A method for detecting whether an audible alarm generated by a smoke detector is active, the audible alarm having an alarm period comprising a plurality of on periods and a plurality of off periods arranged in a predetermined temporal pattern, each of the on periods being a period during which an audible alarm sound is generated by the smoke detector, each of the off periods being a period during which no audible sound is generated by the smoke detector, the method comprising:

detecting a peak amplitude in each of a plurality of sample periods, each of the sample periods corresponding to one of the expected on or off periods in a single alarm period;

selecting a maximum peak amplitude from among the peak amplitudes;

setting an amplitude threshold, the amplitude threshold being a function of the maximum peak amplitude;

comparing each of the peak amplitudes to the amplitude threshold for each of the sample periods to determine which sample periods have a peak amplitude that exceeds the amplitude threshold;

determining whether the audible alarm is active based at least in part on whether the temporal pattern of sample periods in which the peak amplitude exceeds the amplitude threshold matches the predetermined temporal pattern.

36. (New) The method of claim 35, further comprising the step of:

determining a frequency corresponding to the peak amplitude in each of the sample periods corresponding to an on period in the predetermined temporal pattern;

wherein the determining step is further based on whether a frequency corresponding to the peak amplitude in each of the sample periods corresponding to an on period in the predetermined

temporal pattern corresponds to an alarm frequency at which each of the audible alarm sounds is generated.

37. (New) The method of claim 35, wherein the amplitude threshold is no less than a minimum amplitude above an average ambient noise level.

38. (New) The method of claim 35, further comprising the steps of:

obtaining, prior to the detecting step, an ambient sound sample;

examining a parameter of the ambient sound sample to determine whether the audible alarm is present; and

delaying, in the absence of a possibility that the audible alarm may be present, a period of time and repeating the obtaining and examining steps;

wherein the detecting, setting, selecting, comparing and determining steps are performed when there is a possibility that an audible alarm may be present.

39. (New) The method of claim 35, further comprising the step of activating an alerting device when the audible alarm is active.

40. (New) The method of claim 39, wherein the alerting device is a tactile alerting device.

41. (New) The method of claim 35, further comprising the step of sending an activation message to a remote device.

42. (New) A device for detecting whether an audible alarm generated by a smoke detector is active, the audible alarm having an alarm period comprising a plurality of on periods and a plurality of off periods arranged in a predetermined temporal pattern, each of the on periods being a period during which an audible alarm sound is generated by the smoke detector, each of the off periods being a period during which no audible sound is generated by the smoke detector, the device comprising:

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a microphone; and

a processor connected to the microphone;

wherein the processor is configured to perform the steps of:

detecting a peak amplitude in each of a plurality of sample periods, each of the sample periods corresponding to one of the expected on or off periods in a single alarm period;

selecting a maximum peak amplitude from among the peak amplitudes;

setting an amplitude threshold, the amplitude threshold being a function of the maximum peak amplitude;

comparing each of the peak amplitudes to the amplitude threshold for each of the sample periods to determine which sample periods have a peak amplitude that exceeds the amplitude threshold;

determining whether the audible alarm is active based at least in part on whether the temporal pattern of sample periods in which the peak amplitude exceeds the amplitude threshold matches the predetermined temporal pattern.

43. (New) The device of claim 42, wherein the processor is further configured to perform the step of:

determining a frequency corresponding to the peak amplitude in each of the sample periods corresponding to an on period in the predetermined temporal pattern;

wherein the determining step is further based on whether a frequency corresponding to the peak amplitude in each of the sample periods corresponding to an on period in the predetermined temporal pattern corresponds to an alarm frequency at which each of the audible alarm sounds is generated.

44. (New) The device of claim 42, wherein the amplitude threshold is no less than a minimum amplitude above an average ambient noise level.

45. (New) The device of claim 42, wherein the processor is further configured to perform the steps of:

obtaining, prior to the detecting step, an ambient sound sample;

examining a parameter of the ambient sound sample to determine whether the audible alarm is present; and

delaying, in the absence of a possibility that the audible alarm may be present, a period of time and repeating the obtaining and examining steps;

wherein the detecting, setting, selecting, comparing and determining steps are performed when there is a possibility that an audible alarm may be present.

46. (New) The device of claim 42, further comprising an alerting device connected to the processor.

47. (New) The device of claim 46, wherein the alerting device is a tactile alerting device.

48. (New) The device of claim 42, wherein the processor is further configured to perform the step of sending an activation message to a remote device.

49. (New) A device for detecting a smoke detector audible alarm with a temporal pattern comprising:

a microphone; and

a processor connected to the microphone;

wherein the processor is configured to perform the steps of

examining a parameter of ambient sound to determine if there is a possibility that an audible alarm is active;

in the absence of a possibility that an audible alarm is active, delaying a period of time and repeating the examining step;

if there is a possibility than an audible alarm is active, examining a first parameter of ambient sound for a plurality of sample periods;

comparing the first parameter to an expected temporal pattern; and

declaring an audible alarm detection based at least in part on whether the first parameter matches the temporal pattern of the audible alarm.

50. (New) The device of Claim 49, wherein the first parameter is a magnitude of a peak amplitude in the at least some of the sample periods.

51. (New) The device of Claim 49, further comprising an alerting device connected to the processor, the processor being further configured to activate the alerting device when an audible alarm detection is declared.

52. (New) The device of Claim 49, wherein the processor is further configured to perform the step of sending an activation message to a remote device via a transmitter connected to the processor.

53. (New) The device of Claim 49, wherein the remote device is a smoke detector configured to receive an activation message.

54. (New) The device of Claim 49, wherein the processor is further configured to perform the steps of:

if there is a possibility than an audible alarm is active, examining a second parameter of ambient sound for a plurality of sample periods; and

comparing the second parameter to the expected temporal pattern;

wherein the declaration of an audible alarm is further based on whether the second parameter matches the expected temporal pattern.

55. (New) The device of Claim 49, further comprising an alerting device connected to the processor.

56. (New) The device of Claim 55, wherein the alerting device is a tactile alerting device.